

# DUPLICATE

Rec'd PCT/PTO 26 APR 2005

10/532822

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP03/12319

### A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl.<sup>7</sup> H05B41/24, 41/231, 41/02, H02M7/48, H01F38/08, H05K1/14, F21V23/00

According to International Patent Classification (IPC) or to both national classification and IPC

### B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl.<sup>7</sup> H05B41/00-41/46, H02M7/48-7/5395, H01F38/08, H05K1/14, F21V23/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho	1926-1996	Jitsuyo Shinan Toroku Koho	1996-2004
Kokai Jitsuyo Shinan Koho	1971-2004	Toroku Jitsuyo Shinan Koho	1994-2004

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

### C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y A	US 5932976 A (MATSUSHITA ELECTRIC WORKS R&D LABORATORY, INC.), 03 August, 1999 (03.08.99), Column 5, lines 12 to 39; column 7, lines 12 to 39; all drawings & JP 10-284265 A Par. Nos. [0023], [0034]; all drawings	1 2-17, 21-31 18-20
X Y A	CD-ROM of the specification and drawings annexed to the request of Japanese Utility Model Application No. 43481/1992 (Laid-open No. 5191/1994) (Sanken Electric Co., Ltd.), 21 January, 1994 (21.01.94), Full text; Figs. 1 to 4	1 2-17, 21-31 18-20

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

<p>* Special categories of cited documents:</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p>	<p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</p> <p>"&amp;" document member of the same patent family</p>
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Date of the actual completion of the international search  
06 January, 2004 (06.01.04)

Date of mailing of the international search report  
20 January, 2004 (20.01.04)

Name and mailing address of the ISA/  
Japanese Patent Office

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## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y A	WO 96/20578 A2 (PHILIPS ELECTRONICS N.V.), 04 July, 1996 (04.07.96), Page 25, lines 13 to 31; all drawings & US 5569984 A & JP 9-510046 A Page 32, line 16 to page 33, line 8; all drawings	2-17, 21-31 18-20
Y A	WO 97/42650 A2 (PHILIPS ELECTRONICS N.V.), 13 November, 1997 (13.11.97), Page 5, lines 23 to 30; page 6, line 29 to page 7, line 16; all drawings & US 5923127 A & JP 11-509679 A Page 8, line 22 to page 9, line 1; page 10, lines 4 to 25; all drawings	2-17, 21-31 18-20
Y A	JP 2000-58284 A (Ushio Inc., Osaka Koha Kabushiki Kaisha), 25 February, 2000 (25.02.00), Claim 3; Par. Nos. [0023], [0033]; all drawings (Family: none)	2-17, 21-31 18-20
Y	WO 00/78100 A1 (MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.), 21 December, 2000 (21.12.00), Page 28, lines 23 to 28 & JP 2000-357617 A Column 3, lines 20 to 25	17
Y	JP 2001-297922 A (Cohsel Kabushiki Kaisha), 26 October, 2001 (26.10.01), Par. Nos. [0004] to [0006]; Figs. 5, 6 (Family: none)	17
Y	JP 2002-170425 A (MATSUSHITA ELECTRIC WORKS, LTD.), 14 June, 2002 (14.06.02), Full text; all drawings (Family: none)	21-30
Y	Microfilm of the specification and drawings annexed to the request of Japanese Utility Model Application No. 113305/1982 (Laid-open No. 18460/1984) (Alps Electric Co., Ltd.), 04 February, 1984 (04.02.84), Full text; Figs. 2 to 4	21-30
Y	JP 5-198911 A (Sharp Corp.), 06 August, 1993 (06.08.93), Full text; Figs. 1, 2 (Family: none)	22-24

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## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	Microfilm of the specification and drawings annexed to the request of Japanese Utility Model Application No. 41094/1987 (Laid-open No. 149566/1988) (Victor Company Of Japan, Ltd.), 03 October, 1988 (03.10.88), Full text; Figs. 1 to 3	25
Y	JP 2002-140926 A (MATSUSHITA ELECTRIC WORKS, LTD.), 17 May, 2002 (17.05.02), Full text; Figs. 1, 2 (Family: none)	29
Y	JP 9-282927 A (Koito Manufacturing Co., Ltd.), 31 October, 1997 (31.10.97), Full text; all drawings (Family: none)	30
A	EP 314077 A2 (MATSUSHITA ELECTRIC WORKS, LTD.), 03 May, 1989 (03.05.89), Full text; all drawings & US 4912374 A & JP 1-112698 A Full text; all drawings	1-31

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## Box I Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:

because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:

because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:

because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

The technical feature common to claims 1-31 relates to "making the first series-connected resonance circuit resonate with the switching frequency multiplied by an integer and generating a high voltage to start the high-pressure discharge lamp". However, the search has revealed that the technical feature is not novel since the common feature in which the "multiplied by an integer" is "multiplied by 1" is disclosed in documents cited in category "X".

As a result, the technical feature makes no contribution over the prior art and cannot be "a special technical feature" within the meaning of PCT Rule 13.2, second sentence.

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☒ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest ☐ The additional search fees were accompanied by the applicant's protest.

☐ No protest accompanied the payment of additional search fees.